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A.D. 1857 . . . . . N° 1.

Machinery for Making Carpet Lining, &c.

LETTERS PATENT to John Talbot Pitman, of the American and European Patent Offices, 67, Gracechurch Street, London, for the Invention of "A Machine for Making Carpet Lining and other similar Articles."—A communication.

Sealed the 30th June 1857, and dated the 1st January 1857.

PROVISIONAL SPECIFICATION left by the said John Talbot Pitman at the Office of the Commissioners of Patents, with his Petition, on the 1st January 1857.

I, John Talbot Pitman, of the American and European Patent Offices, 67, Gracechurch Street, London, do hereby declare the nature of the said Invention for "A Machine for Making Carpet Lining and other similar Articles," a communication from a foreigner residing abroad, to be as follows:—

It consists in operating by mechanical means two rollers or spindles, containing sheets of paper or cloth rolled thereon, so arranged in relation to a sheet of cotton batting or other similar material, whether the same be placed upon an intermediate roller or supplied by any other suitable means, that when the paper sheets are unrolled they shall incase between them the cotton sheet; in compressing between another set of rolls this combination as it moves onward, the cotton sheet resting on the lower sheet as an apron; in creasing the same into folds of suitable lengths for measuring, packing, &c. by means of another pair of rollers or drums, having at right angles to the plane of the circumference alternately ridges & grooves, playing into each other at a suitable distance, say, half a yard from each set apart; in constructing the platform on which the lining falls so that at a proper time the lining can be removed in one body to be packed; also in connecting, when required, troughs

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having revolving cylindrical brushes, so that the brushes may receive from the troughs a sizing or paste, and apply the same to that side of each of the sheets of paper coming in contact with the surface of the cotton sheet in order to render the combination more perfect by the consequent adhesion.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said John Talbot Pitman in the Great Seal Patent Office on the 1st July 1857.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOHN TALBOT PITMAN, of the American and European Patent Offices, 67, Gracechurch Street, London, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the First day of January, in the year of our Lord One thousand eight hundred and fifty-seven, in the twentieth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said John Talbot Pitman, Her special licence that I, the said John Talbot Pitman, or my executors, administrators, and assigns, or such others as I, the said John Talbot Pitman, or my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "A MACHINE FOR MAKING CARPET LINING AND OTHER SIMILAR ARTICLES," a communication from a foreigner residing abroad, upon the condition (amongst others) that I, the said John Talbot Pitman, or my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said John Talbot Pitman, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The nature of my Invention consists in operating by mechanical means two rollers or spindles containing sheets of paper or fabric rolled thereon, so arranged in relation to a sheet of cotton batting or other suitable material,

whether the same be placed upon an intermediate roller, as herein-after described, or supplied by other suitable arrangements, that when the paper sheets are unrolled they shall encase between them the cotton sheets; also, in compressing between another set of rolls this combination as it moves onward, the cotton sheet resting on the lower or under sheet as upon an apron; also, in the mode of folding and measuring the same; also, in the construction of the platform on which the lining falls; also, in the arrangement of the apparatus for sizing, when required, the inner sides of the paper sheets, in order to render the combination more perfect by the consequent adhesion.

I the accompanying Drawing, representing a side elevation of the machine, *a* is the frame; *b*, *b*, are spindles hung at different elevations horizontally athwart the frame. These spindles rotate in stationary bearings C, C, attached to the frame. On each spindle is wound the paper in a continuous sheet *d*, *d*. *e* is another spindle, holding the cotton bat *g*, resting in oblique slots *f*, and parallel with and intermediate between the spindles *b*, *b*. The oblique slotted bearings enable the spindle to advance as the lap upon it decreased in the continuous revolution. This cotton sheet rests upon the lower roll of paper, and is supported and drawn onward by it towards and between two rollers *h*, h^1, placed one above the other in vertical bearings *i*, and which act as pressure rollers. To the shaft of the roller *h* the driving power is applied. J, J^1, are two rollers, placed in advance of and on a level with the rollers *h*, h^1, each having two longitudinal ridges K^1, K, and grooves *l*, *l*, so adjusted that the ridge of one roller shall be the counterpart of the groove in the other, and vice versa alternately. These rollers, called the "creasing rollers," are in circumference, including the ridges and grooves, exactly two yards, or measure exactly half a yard from one ridge to the next groove, and by the alternation creates a fold, serving a twofold purpose, in connection with a platform or box placed under the delivery of the said rollers, namely, depositing the material in uniform folds, each of which represents exactly one yard of the stuff; and the stuff is thus without any further manipulation accurately measured off and conveniently folded for baling. This peculiar mode of folding becomes necessary from the nature of the paper, which not being susceptable to stretching, a continuous folding or rolling of the material in one direction, besides preventing the above described method of measurement, would result in a wrinkling of one of the paper layers, that would interfere with the smooth disposal of the lining upon a floor. *m* is a platform to receive the lining from the creasing rolls; *n* is a temporary front, which, being held up by a pawl *o* during the folding of the stuff, can be let down to permit the removal of the piece for baling. The two creasing rollers are geared so

as to ensure their equal action and rotation. p, p^1, are troughs containing vegetable mucilage. In these troughs are hung cylindrical brushes q, q^1, which are capable of rotation. These brushes, by means of counterbalances r, are made to press and revolve against the intended inner surfaces of the paper, covering them with a thin coating, and creating a bond of union between the surfaces of the filling and the inner surfaces of the paper.

When the machine is intended to manufacture a lining or wadding without the necessity of any strong adhesion between the intermediate layer and the external sheets of paper or cloth, the pressure alone may be sufficient, and the brushing apparatus be dispensed with.

This machine is useful not only for making carpet lining and wadding, but also for making boiler covering, cardboard, bonnet board, and for similar purposes where an union of two or more sheets is desired.

Having thus described my Invention and its advantages, what I claim under the above in part recited Letters Patent is,—

First, the arrangement of the spindles on which the outer sheets are placed, in combination with the intermediate spindle containing the inner layer, or without it, the same being operated in the manner and for the purposes substantially as described.

Second, the arrangement and employment of the rolls h, h^1, in combination with the last mentioned arrangement, for the purposes substantially as herein set forth.

Third, the arrangement and construction of the creasing rolls j, j^1, when used in this connection for the purpose of folding and measuring, substantially as described.

Fourth, the arrangement of the sizing or glueing apparatus, operated in the same manner and for the purposes substantially as specified.

Fifth, the box or platform with a falling front, substantially as described, and for the purpose mentioned.

In witness whereof, I, the said John Talbot Pitman, have hereunto set my hand and seal, on this Thirtieth day of June, in the year of our Lord One thousand eight hundred and fifty-seven.

JOHN TALBOT PITMAN. (L.S.)

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